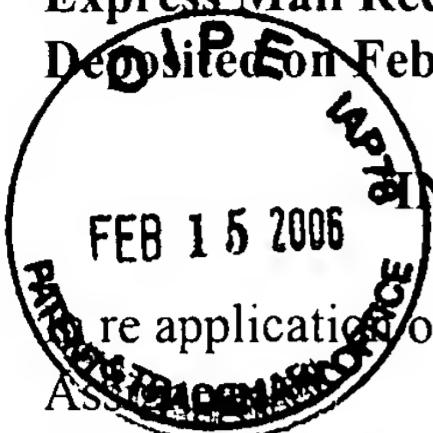


02-16-06

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Express Mail Receipt No. ED817811591US
Deposited on February 15, 2006

PATENT
Dkt. STL11421



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

re application of: **Clark E. Lubbers and Randy L. Roberson**
Application No.: **10/658,982** Group No.: **3728**
Filed: **September 10, 2003** Examiner:
For: **ADAPTIVE MAPPING**

Mail Stop Petition
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

**REQUEST FOR RECONSIDERATION OF PETITION TO
MAKE SPECIAL FOR NEW APPLICATION UNDER M.P.E.P. § 708.02, VIII**

1. Petition

Applicant hereby requests reconsideration of the petition to make this new application, which has not received any examination by the Examiner, special. It is submitted that all of the elements set forth in M.P.E.P. §708.02, VIII, allegedly deficient in the first petition, are provided in the attached Request for Reconsideration of Adverse Decision Dated December 15, 2005. As directed in the Decision on Petition, this request for reconsideration is being filed within two months of the mail date of the Decision. A copy of the Decision dated 12/15/05 is attached.

2. Claims

All the claims in this case are directed to a single invention. If the Office determines that all the claims presented are not obviously directed to a single invention, then applicant will make an election without traverse as a prerequisite to the grant of special status.

3. Search

A search was made by a professional searcher in the following and a copy of the search was provided with the original petition:

Field of search: Memory
Class/Subclasses
711/114, 170, 202 & 203

Database
Class/Subclasses
707/100 and 102

4. Copy of references

All of the references most closely related to the subject matter encompassed by the claims are of record or were listed on Form PTO/SB/08A and the Supplemental Information Disclosure Statement which accompanied the original Petition, in accordance with M.P.E.P. 708.02VIII(D).

5. Detailed discussion of the references

There is submitted herewith a detailed discussion of Applicant's cited references, that are deemed most closely related to the subject matter encompassed by the claims. This discussion particularly points out how the claimed subject matter is distinguishable over the cited references. References that were included in the Information Disclosure Statement, but not cited, are either directed to the state of the art or are cumulative.

6. Fee

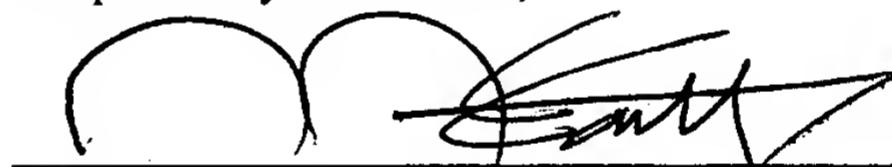
The fee required by 37 C.F.R. 1.17(h) was paid with the filing of the original petition to make special. Applicant does not believe that there are any fees due with this filing.

However, authorization is hereby made to charge our Deposit Account No. 06-0540, if a fee is in fact due at this time.

Charge any additional fees required by this paper or credit any overpayment to Deposit Account No. 06-0540. A duplicate of this paper is attached.

Date: 2/15/2016

Respectfully submitted,



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UNITED STATES PATENT AND TRADEMARK OFFICE



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In re Application of:
Clark E. LUBBERS, et al.
Application No. 10/658,982
Filed: September 10, 2003
For: ADAPTIVE MAPPING

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Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

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Recommendation
(2 mo.)

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DEC 15 2005

Technology Center 2100

**DECISION ON PETITION
TO MAKE SPECIAL**

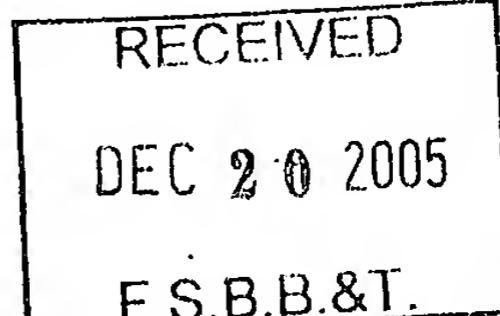
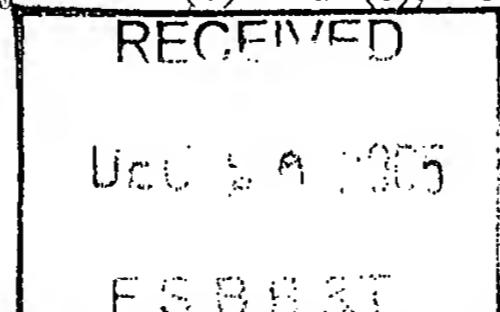
This is a decision on the petition, filed on July 11, 2005 under 37 C.F.R. §102(d) and M.P.E.P. § 708.02(VIII): Accelerated Examination, to make the above-identified application special.

The petition is **DISMISSED**.

M.P.E.P. § 708.02, Section VIII which sets out the prerequisites for a grantable petition for Accelerated Examination under 37 C.F.R. § 102(d) states in relevant part:

A new application (one which has not received any examination by the examiner) may be granted special status provided that applicant (and this term includes applicant's attorney or agent) complies with each of the following items:

- (A) Submits a petition to make special accompanied by the fee set forth in 37 CFR § 1.17(h);
- (B) Presents all claims directed to a single invention, or if the Office determines that all the claims presented are not obviously directed to a single invention, will make an election without traverse as a prerequisite to the grant of special status;
- (C) Submits a statement(s) that a pre-examination search was made, listing the field of search by class and subclass, publication, Chemical Abstracts, foreign patents, etc. A search made by a foreign patent office satisfies this requirement;
- (D) Submits one copy each of the references deemed most closely related to the subject matter encompassed by the claims if said references are not already of record; and
- (E) Submits a detailed discussion of the references, which discussion points out, with the particularity required by 37 CFR §§ 1.111 (b) and (c), how the claimed subject matter is patentable over the references.



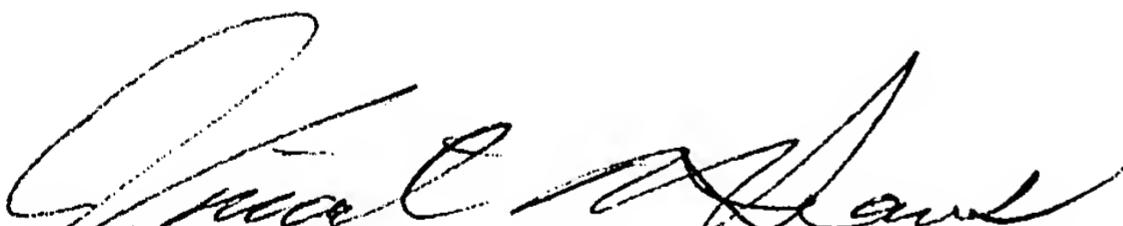
In those instances where the request for this special status does not meet all the prerequisites set forth above, applicant will be notified and the defects in the request will be stated. The application will remain in the status of a new application awaiting action in its regular turn. In those instances where a request is defective in one or more respects, applicant will be given one opportunity to perfect the request in a renewed petition to make special. If perfected, the request will then be granted. If not perfected in the first renewed petition, any additional renewed petitions to make special may or may not be considered at the discretion of the Group Special Program Examiner.

Applicant's submission of July 11, 2005 fails to meet requirement (E) as set forth above. There is no detailed discussion of the references to the extent required by 37 CFR 1.111(b) and (c). In addition, the discussion does not sufficiently distinguish the patentable feature in the claimed subject matter relative to the prior art references. Applicant must bring out the specific feature that defines the claimed invention as set forth in the independent claims in order to properly discuss the same with relevant details from each of the references. Section (E) explicitly mandates that the "discussion points out, with the particularity required by 37 CFR 1.111 (b) and (c), how the claimed subject matter is patentable over the references." Applicant's petition, however, does not distinctly identify the claim component that distinguishes the claimed invention from the reference prior art.

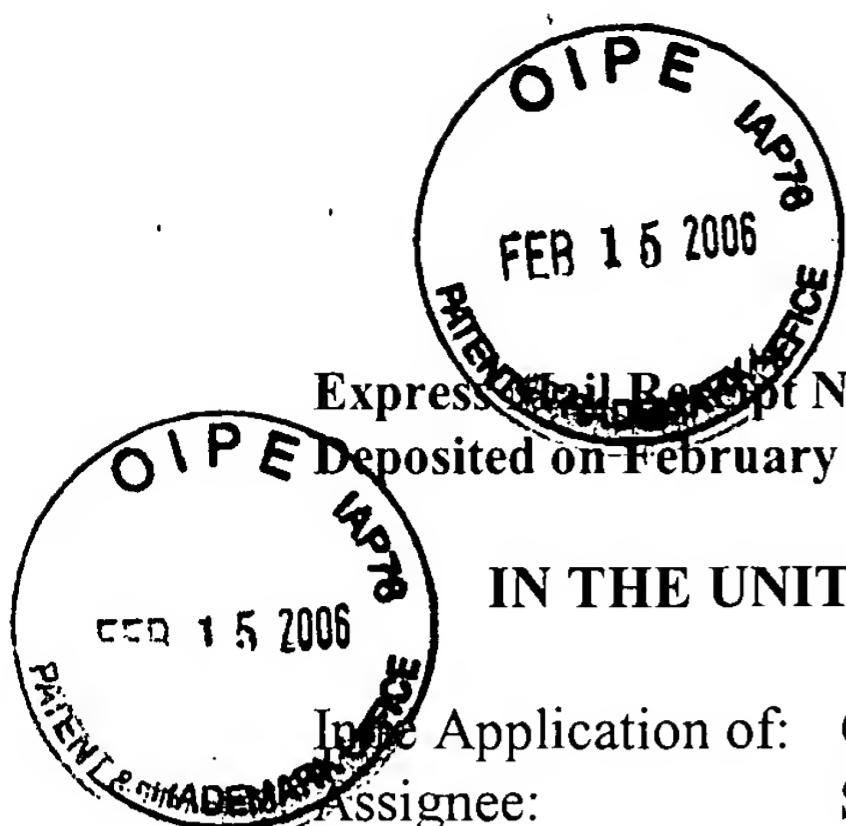
Applicant's petition provided no statement that a pre-examination search was made and no discussions of the references and how the claimed subject matter is patentable over the references.

Accordingly, the petition is **DISMISSED**. Petitioner is given one opportunity to perfect the petition. Any request for reconsideration must be filed within TWO MONTHS of the mail date of this decision.

Until the renewed petition is submitted, the application will be returned to the examiner's docket to await treatment on the merits in the normal order of examination.



Vincent N. Trans
Special Program Examiner
Technology Center 2100
Computer Architecture, Software, and
Information Security
571-272-3613



Express Mail Receipt No. ED817811591US
Deposited on February 15, 2006

PATENT
Dkt. STL11421

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Initial Application of: **Clark E. Lubbers and Randy L. Roberson**
Assignee: **SEAGATE TECHNOLOGY LLC**
Application No.: **10/658,982** Group Art Unit: **3728**
Filed: **September 10, 2003** Examiner:
For: **ADAPTIVE MAPPING**

Mail Stop Petition
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

REQUEST FOR RECONSIDERATION OF ADVERSE DECISION
DATED DECEMBER 15, 2005

Sir:

This Request for Reconsideration of the adverse Decision of December 15, 2005 is based on the Applicant's compliance with all the requirements for accelerated examination. The Applicant respectfully requests reconsideration and granting of the Petition, and provides the following remarks and supplemental statements in support thereof.

Bases for Dismissal

The Petition was dismissed on the following bases:

1. MPEP §708.02(VIII)(e) was deemed to not be satisfied. "There is no detailed discussion of the references to the extent required by 37 CFR 1.111(b) and (c). In addition, the discussion does not sufficiently distinguish the patentable feature in the claimed subject matter relative to the prior art preferences. Applicant must bring out the specific feature that defines the claimed invention as set forth in the independent claims in order to properly discuss the same with relevant details from each of the references. Section (E) explicitly mandates that the "discussion points out, with the particularity required by 37 CFE [sic] 1.111 (b) and (c), how

the claimed subject matter is patentable over the references.”

Applicant’s petition, however, does not distinctly identify the claim component that distinguishes the claimed invention from the reference prior art.” The Office further stated in the Dismissal: “and no discussions of the references and how the claimed subject matter is patentable over the references.”

(Decision, pg. 2)

2. Without specifically referring to MPEP 708.02(c), the Office further stated in the Dismissal: “Applicant’s petition provided no statement that a pre-examination search was made....”

(Decision, pg. 2)

Each of these bases will be addressed below in turn.

1. Applicant is Required to Point Out With Particularity Pursuant to 37 CFR 1.111 how the Claimed Subject Matter is Distinguishable over the Most Closely Related References

The Applicant believes that the originally filed Detailed Discussion of the References complied with the requirements of MPEP §708.02(VIII). That is, Applicant traverses the Office’s characterization of the Petition as not meeting the particularity requirements of 37 CFR 1.111(b) and (c). In short, Applicant argued specifically how the present embodiments are patentable over the art of record on the basis of the explicitly recited claim language. First, the Petition characterizes in terms of the language of independent claims 1 and 16, with explicit emphasis (underlining) of the claim language *sparse directory structure* is to be *changed*, and *reconstructing* said sparse directory structure into a *fully populated directory*. Second, after a discussion of the most closely related references, Applicant then restated the patentable distinction of the present embodiments in terms of the explicitly recited claim language:

It is respectfully submitted that all of the above references, as well as the remaining references of record, are silent with regard to determining that a sparse directory structure is to be changed, and reconstructing said sparse directory

structure into a fully populated directory structure in response thereto as generally featured by pending claims 1-11, 16-28.

(Applicant's Petition, pg. 3)

Applicant believes it is incontrovertible that the Petition expressly pointed to the claim language that patentably distinguishes the present embodiments over the art of record, in accordance with the particularity requirements of Rule 1.111.

Nevertheless, and solely in order to obviate the Office's objections, Applicant now supplements the Detailed Discussion of the References required by MPEP §708.02(VIII)(e) in the following.

The embodiments of the present invention as claimed can at least be characterized without limitation by the following recited features:

Independent Claim 1

A method of maintaining a directory for a data container comprising determining that a sparse directory structure is to be changed; and reconstructing said sparse directory structure into a fully populated directory structure.

Independent Claim 16

A data storage system comprising a data storage container; and a controller that defines a sparse directory structure for said data container, determines that said sparse directory structure is to be changed, and reconstructs said sparse directory structure into a fully populated directory structure.

Among the requirements for patentability are the requirements of novelty pursuant to 35 U.S.C. §§101 and 102, and the requirement of non-obviousness under §103. It is respectfully submitted that the claimed subject matter as set forth by the above independent claims, as well as for the claims depending therefrom, meet the above requirements of

patentability, in that the foregoing subject matter is not disclosed, taught or suggested by the references of record. This will be set forth as follows.

(1) Patentability of the Claims over Gusack '897

U.S. Patent No. 6,356,897 issued to Gusack ("Gusack '897") discloses a computer implemented method of linking information arranged in one or more relational tables. Each of the relational tables has a plurality of fields to which are assigned a unique domain of indicia for sorting and inserting the fields. Another central linking table is formed with linking fields wherein the indicia are stored, thereby forming links between each of the fields and among all the relational tables. The central linking table is indexable in order to provide multiple arrays of linking indicia so that information stored in the fields of the relational tables can be linked together as an indexed data cluster.

The Applicant respectfully submits that Gusack '897 at least fails to disclose *a method of maintaining a directory for a data container comprising determining that a sparse directory structure is to be changed; and reconstructing said sparse directory structure into a fully populated directory structure* as in the present embodiments as set forth by claim 1. This limitation is exemplified (without limitation) such as by the data storage system of FIG. 1 having executable instructions stored in memory for performing the method for adapting directory structures illustrated in FIG. 2. Since Gusack '897 fails to disclose this limitation, a *prima facie* case of anticipation cannot be made under §102. See *In re Bond*, 15 USPQ2d 1566 (Fed. Cir. 1990).

The Applicant further respectfully submits that there is nothing in the art to make up for the above deficiency of Gusack '897 with regard to establishing a *prima facie* case of obviousness under §103(a). There is no suggestion or motivation, either in Gusack '897 or

in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings to arrive at the subject matter of claim 1. Moreover, the reference of record (or references when combined) must teach or suggest all the claim limitations, and the above limitation is not taught by Gusack '897 or other art. On these bases, the Applicant respectfully submits that the subject matter of claim 1 is patentable over Gusack '897 in view of §103(a).

With regard to independent claim 16, the Applicant respectfully submits that Gusack '897 fails to disclose *a data storage system comprising a data storage container; and a controller that defines a sparse directory structure for said data container, determines that said sparse directory structure is to be changed, and reconstructs said sparse directory structure into a fully populated directory structure* as in the present embodiments as claimed. As in claim 1 above, this limitation is exemplified (without limitation) such as by the data storage system of FIG. 1 having executable instructions stored in memory for performing the method for adapting directory structures illustrated in FIG. 2. As the Examiner will appreciate, this deficiency of Gusack '897 means that claim 16 cannot be rejected under §102 as being anticipated by Gusack '897.

Moreover, Applicant respectfully submits that this limitation is not taught or suggested by Gusack '897 or other art of record, that there is no suggestion or motivation, either in Gusack '897 or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings to arrive at the subject matter of claim 16. On these bases, the Applicant respectfully submits that the subject matter of claim 16 is patentable over Gusack '897 in view of §103(a).

In view of the foregoing, Applicant reasonably concludes that the subject matter of claims 1-11 and 16-28 defines subject matter that is patentable over Weber '171.

(2) Patentability of the Claims over Jenevein '291

U.S. Patent No. 6,173,291 issued to Jenevein ("Jenevein '291") discloses a method and apparatus for managing files in a computer environment. Lost or corrupted files are copied when file system information associated with such files is corrupted or destroyed. A sector-by-sector scanning and filtering process is carried out in an attempt to identify sectors from the lost files, and the information collected from the scanning and filtering process is used to reconstruct directory trees of files for further use.

The Applicant respectfully submits that Jenevein '291 at least fails to disclose *a method of maintaining a directory for a data container comprising determining that a sparse directory structure is to be changed; and reconstructing said sparse directory structure into a fully populated directory structure* as in the present embodiments as set forth by claim 1. This limitation is exemplified (without limitation) such as by the data storage system of FIG. 1 having executable instructions stored in memory for performing the method for adapting directory structures illustrated in FIG. 2. Since Jenevein '291 fails to disclose this limitation, a *prima facie* case of anticipation cannot be made under §102. See *In re Bond*, 15 USPQ2d 1566 (Fed. Cir. 1990).

The Applicant further respectfully submits that there is nothing in the art to make up for the above deficiency of Jenevein '291 with regard to establishing a *prima facie* case of obviousness under §103(a). There is no suggestion or motivation, either in Jenevein '291 or in the knowledge generally available to one of ordinary skill in the art, to modify the

reference or to combine reference teachings to arrive at the subject matter of claim 1. Moreover, the reference of record (or references when combined) must teach or suggest all the claim limitations, and the above limitation is not taught by Jenevein '291 or other art. On these bases, the Applicant respectfully submits that the subject matter of claim 1 is patentable over Jenevein '291 in view of §103(a).

With regard to independent claim 16, the Applicant respectfully submits that Jenevein '291 fails to disclose *a data storage system comprising a data storage container; and a controller that defines a sparse directory structure for said data container, determines that said sparse directory structure is to be changed, and reconstructs said sparse directory structure into a fully populated directory structure* as in the present embodiments as claimed. As in claim 1 above, this limitation is exemplified (without limitation) such as by the data storage system of FIG. 1 having executable instructions stored in memory for performing the method for adapting directory structures illustrated in FIG. 2. As the Examiner will appreciate, this deficiency of Jenevein '291 means that claim 16 cannot be rejected under §102 as being anticipated by Jenevein '291.

Moreover, Applicant respectfully submits that this limitation is not taught or suggested by Jenevein '291 or other art of record, that there is no suggestion or motivation, either in Jenevein '291 or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings to arrive at the subject matter of claim 16. On these bases, the Applicant respectfully submits that the subject matter of claim 16 is patentable over Jenevein '291 in view of §103(a).

In view of the foregoing, Applicant reasonably concludes that the subject matter of claims 1-11 and 16-28 defines subject matter that is patentable over Jenevein '291.

(3) Patentability of the Claims over Schmidt '185

U.S. Patent No. 6,117,185 issued to Schmidt ("Schmidt '185") discloses a skip list data structure and associated compiler in a computer system. The skip list is disclosed as storing various properties of a computer program at different points within the flow thereof for dataflow analysis. A routine is further disclosed to ensure that the skip list structure is not used inefficiently as a result of initialization.

The Applicant respectfully submits that Schmidt '185 at least fails to disclose *a method of maintaining a directory for a data container comprising determining that a sparse directory structure is to be changed; and reconstructing said sparse directory structure into a fully populated directory structure* as in the present embodiments as set forth by claim 1. This limitation is exemplified (without limitation) such as by the data storage system of FIG. 1 having executable instructions stored in memory for performing the method for adapting directory structures illustrated in FIG. 2. Since Schmidt '185 fails to disclose this limitation, a *prima facie* case of anticipation cannot be made under §102. See *In re Bond*, 15 USPQ2d 1566 (Fed. Cir. 1990).

The Applicant further respectfully submits that there is nothing in the art to make up for the above deficiency of Schmidt '185 with regard to establishing a *prima facie* case of obviousness under §103(a). There is no suggestion or motivation, either in Schmidt '185 or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings to arrive at the subject matter of claim 1. Moreover, the reference of record (or references when combined) must teach or suggest all the claim limitations, and the above limitation is not taught by Schmidt '185 or other art.

On these bases, the Applicant respectfully submits that the subject matter of claim 1 is patentable over Schmidt '185 in view of §103(a).

With regard to independent claim 16, the Applicant respectfully submits that Schmidt '185 fails to disclose *a data storage system comprising a data storage container; and a controller that defines a sparse directory structure for said data container, determines that said sparse directory structure is to be changed, and reconstructs said sparse directory structure into a fully populated directory structure* as in the present embodiments as claimed. As in claim 1 above, this limitation is exemplified (without limitation) such as by the data storage system of FIG. 1 having executable instructions stored in memory for performing the method for adapting directory structures illustrated in FIG. 2. As the Examiner will appreciate, this deficiency of Schmidt '185 means that claim 16 cannot be rejected under §102 as being anticipated by Schmidt '185.

Moreover, Applicant respectfully submits that this limitation is not taught or suggested by Schmidt '185 or other art of record, that there is no suggestion or motivation, either in Schmidt '185 or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings to arrive at the subject matter of claim 16. On these bases, the Applicant respectfully submits that the subject matter of claim 16 is patentable over Schmidt '185 in view of §103(a).

In view of the foregoing, Applicant reasonably concludes that the subject matter of claims 1-11 and 16-28 defines subject matter that is patentable over Schmidt '185.

(4) Patentability of the Claims over Lubbers '102

U.S. Published Patent Application No. US2003/0079102 A1 to Lubbers et al. ("Lubbers '102") discloses a data storage system with a logical disk mapping structure that

generates a predecessor logical disk data structure that is a snapshot of a successor (original) logical disk data structure. The snapshot is generated by arranging metadata to map the predecessor logical disk to user data stored on physical media.

The Applicant respectfully submits that Lubbers '102 at least fails to disclose *a method of maintaining a directory for a data container comprising determining that a sparse directory structure is to be changed; and reconstructing said sparse directory structure into a fully populated directory structure* as in the present embodiments as set forth by claim 1. This limitation is exemplified (without limitation) such as by the data storage system of FIG. 1 having executable instructions stored in memory for performing the method for adapting directory structures illustrated in FIG. 2. Since Lubbers '102 fails to disclose this limitation, a *prima facie* case of anticipation cannot be made under §102. See *In re Bond*, 15 USPQ2d 1566 (Fed. Cir. 1990).

The Applicant further respectfully submits that there is nothing in the art to make up for the above deficiency of Lubbers '102 with regard to establishing a *prima facie* case of obviousness under §103(a). There is no suggestion or motivation, either in Lubbers '102 or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings to arrive at the subject matter of claim 1. Moreover, the reference of record (or references when combined) must teach or suggest all the claim limitations, and the above limitation is not taught by Lubbers '102 or other art. On these bases, the Applicant respectfully submits that the subject matter of claim 1 is patentable over Lubbers '102 in view of §103(a).

With regard to independent claim 16, the Applicant respectfully submits that Lubbers '102 fails to disclose *a data storage system comprising a data storage container; and a controller that defines a sparse directory structure for said data container, determines that said sparse directory structure is to be changed, and reconstructs said sparse directory structure into a fully populated directory structure* as in the present embodiments as claimed. As in claim 1 above, this limitation is exemplified (without limitation) such as by the data storage system of FIG. 1 having executable instructions stored in memory for performing the method for adapting directory structures illustrated in FIG. 2. As the Examiner will appreciate, this deficiency of Lubbers '102 means that claim 16 cannot be rejected under §102 as being anticipated by Lubbers '102.

Moreover, Applicant respectfully submits that this limitation is not taught or suggested by Lubbers '102 or other art of record, that there is no suggestion or motivation, either in Lubbers '102 or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings to arrive at the subject matter of claim 16. On these bases, the Applicant respectfully submits that the subject matter of claim 16 is patentable over Lubbers '102 in view of §103(a).

In view of the foregoing, Applicant reasonably concludes that the subject matter of claims 1-11 and 16-28 defines subject matter that is patentable over Lubbers '102.

2. Applicant is Required to Submit a Statement That a Pre-Examination Search Has Been Made

In paragraph 3 of the Petition Applicant provided the requisite statement that a search had been made by a professional searcher, listed the relevant classes/subclasses of

the search, and indicated that a copy of the search results were included as part of the Petition. Applicant can only conclude the Office listed this basis in error, and the Office should withdraw the basis on Reconsideration.

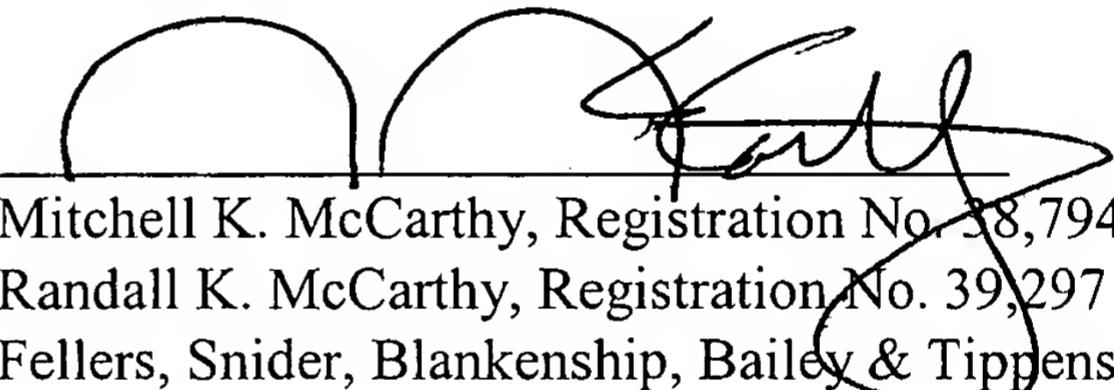
Conclusion

The Applicant respectfully submits that all of the requirements of MPEP §708.02(VIII) have been satisfied, and therefore requests reconsideration and granting of the Applicant's Petition to Make Special.

Should any questions arise concerning this Request for Reconsideration, the Examiner is invited to contact the below-signed attorney.

Respectfully submitted,

By:


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